

IN THE CLAIMS

Please amend the claims as follows:

1. (currently amended) A method of modulating a boom assembly to perform in a ~~linear~~ desired manner, wherein said boom assembly includes a boom and a stick, comprising the steps of:

    sending at least one lever signal to a control device indicative of operator desired direction and desired velocity of said boom and said stick;

    calibrating said at least one lever signals to provide at least one of a boom command signal and a stick command signal;

    applying an algorithm to said at least one of said boom command signal and said stick command signal, wherein said algorithm uses command signal mapping; and

    providing a modulating factor to said control device as a result of said algorithm.

2. (original) The method as set forth in claim 1, further including the step of adding said stick command signal to said boom command signal to provide a calculated signal.

3. (original) The method as set forth in claim 2, wherein said command signal mapping includes:

    mapping said boom command signal to provide a boom map output constant;

    mapping said stick command signal to provide a stick map output constant;

and

    mapping said calculated signal to provide a subtraction factor map output constant.

4. (currently amended) The method as set forth in claim 3, further including the step of multiplying said boom map output ~~signal~~ constant, said stick map output

signal constant, and said subtraction factor map output ~~signal~~ constant to provide a final subtraction factor.

5. (original) The method as set forth in claim 4, further including the step of subtracting said final subtraction factor from a full boom actuator signal to provide a pre-dampened modulating factor.

6. (original) The method as set forth in claim 1, wherein said algorithm includes applying a rate limit control to control the rate at which said modulating factor could increase or decrease with respect to time.

7. (original) The method as set forth in claim 1, further including the step of the step of applying said modulating factor to said boom command signal to modulate said boom movement.

8. (currently amended) A method of using a work machine ~~to grade a surface~~, the work machine having a boom, a stick, and a work implement coupled to the stick, each of the boom and stick is controllable by at least one lever, comprising the steps of:

activating at least one lever to produce a command signal comprising at least one of a stick command signal and a boom command signal;  
communicating said command signal to a control device; and  
using said control device to modulate said command signal in accordance with a command signal mapping such that said work implement travels along a desired ~~in a linear~~ path.

9. (currently amended) The method as set forth in claim 8, further including the step of determining a modulation factor as a result of said command signal mapping.

10. (currently amended) The method as set forth in claim 9, wherein said control device includes the step of applying said modulation factor to said command signal such that the command signal is at least increased or decreased.

11. (new) The method as set forth in claim 1, including causing said boom assembly to move along a linear path.

12. (new) The method as set forth in claim 8, wherein the step of using said control device includes causing said work implement to move along a linear path.